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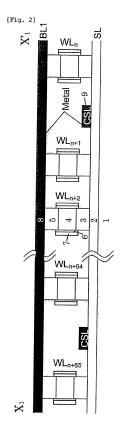
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(54) Nonvolatile semiconductor memory and method of driving the same

(57)A nonvolatile semiconductor memory includes memory cells using side walls of island semiconductor layers which avoid lowering of the writing speed and the reading speed. The memory cells comprise an island semiconductor layer (4) formed on a semiconductor substrate, the island semiconductor layer having a drain diffusing layer (5) formed on top thereof, a source diffusion layer (3) formed on the lower side thereof, a charge-storage layer (6) formed on a channel area on the side wall interposed between the drain diffusion layer and the source diffusion layer via a gate insulation film, and a control gate (7) formed on the charge-storage layer. The cells are arranged in matrix. Bit lines (8) connected to the drain diffusion layers are arranged in the column direction, control gate lines are arranged in the row direction, and source lines (2) connected to the source diffusion layers are arranged in the column direction. Common source lines (9) connected to the source lines (2) are formed at every predetermined number of control gate lines, the common source lines are formed of metal, and the common source lines are arranged in the row direction.



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Category	Citation of document with ir of relevant passa	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
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X	figure 16; tables I	04-01) 4-61; figure 5 * 8-26; figure 10 * 4 - column 15, line 44;	1-10		
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